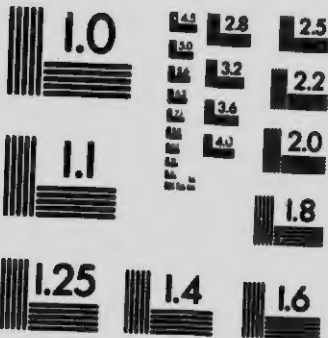


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The Canada
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The Trans-Canada Railway.

By an Act of the Parliament of the Dominion of Canada passed in the year 1893, chapter 68, a charter was granted for the construction of this railway from a point at or near Quebec to the Pacific Ocean at Port Simpson or Port Essington. This Charter was amended in 1897, chapter 65, so as to provide for the commencement of the works not later than 29th June, 1901, and for their completion within ten years from the passing of the Act, and granting power for the construction of a branch line to Montreal.

As the Quebec and Lake St. John Railway runs north-westward from the City of Quebec in a direction suitable for the shortest location of this railway, and as the rivers flowing into Lake St. John on the one side and James Bay on the other offer a route which will give the easiest gradients crossing the height of land between the waters flowing into the St. Lawrence and those flowing into James Bay, and as this route will give the railway the advantage of two eastern seaports, namely, Quebec and Chicoutimi, it has been decided to make use of that line between Quebec and its north-western terminus at Roberval, Lake St. John.

Work was accordingly commenced at Roberval on the 28th June, 1901, in the presence of an immense concourse of people, the clergy of the district giving the enterprise evidence of their sympathy and support by an impressive religious ceremonial on that occasion. Sixty miles of the railway have also been located from Roberval westward towards James Bay, and the plans and profiles have been deposited with the Dominion and Provincial Governments according to law.

The first division of the railway from Roberval to James Bay, 830 miles in length, will pass through the centre of the new territory recently acquired by the Province of Quebec from the Dominion, so that it would be in the interest of the Province to develop this new territory, 70,000 square miles in area, by this route, in preference to any other. Application has been made to the Province for a land grant, and the question is now under consideration.

Three different explorations of the James Bay territory have been made by Mr. Henry O'Sullivan, C.E., director of Provincial Surveys, and his opinion of the country and its resources is given in a short report from him, annexed hereto.

The Hon. Lomer Gouin, Minister of Colonization and Public Works of the Province of Quebec, made an inspection of the country to be traversed by a portion of the first division of the railway in September last, and expressed himself as being very much surprised and impressed with the fertility of the soil and the resources of the country.

On the 16th February, 1901, the President and other representatives of the Quebec Board of Trade and of the Company had an interview with the Right Hon. Sir Wilfrid Laurier at Ottawa, and submitted a memorial, a copy of which is annexed, setting forth the advantages of the railway at considerable length.

After due consideration the Government recognized the merits of the project and submitted to Parliament a subsidy bill, which was duly ratified, granting a subsidy of \$3,200 per mile—or \$192,000—in aid of the first sixty miles of the railway from Roberval westward, to be increased to \$6,400 per mile, should the cost be in excess of \$15,000 per mile to that extent.

The mileage of the proposed railway, allowing the usual percentage for loss in curvature will compare as follows with other existing routes :

Quebec to Vancouver (C. P. R.)	3,078 miles.
Quebec to Port Simpson (Trans-Canada Railway).....	2,830 "
Chicoutimi to Port Simpson " "	2,705 "
Quebec to Yokohama (via Vancouver).....	7,867 "
Chicoutimi to Yokohama (via Port Simpson).....	6,645 "
Vancouver to Yokohama	4,290 miles.
Port Simpson to Yokohama.....	3,949 "
Quebec to Nottaway.....	570 miles.
Roberval to Nottaway	880 "
Roberval to Chicoutimi	64 "
Winnipeg to Quebec (via C. P. R.).....	1,572 miles.
" " " (via projected T. C. R.)	1,410 "
" " Chicoutimi " "	1,284 "
" " Nottaway " "	850 "
" " Churchill (projected)	840 "
Moose Factory to Toronto.....	550 miles.
Head Waters St. Maurice to Montreal.....	200 "

AVERAGE SUMMER TEMPERATURE

	5 years.	In 1895 *
Moose Factory, James Bay.....	58 degrees.	61
Quebec.....	60 "	63
Rimouski.....	55 "	55
Chicoutimi.....	57 "	60
Winnipeg.....	59 "	—
Norway House.....		59
Donikup.....		60
Edmonton		60
Athabasca Landing.....		55
Dunvegan.....		57
Port Simpson.....		55

SNOW-FALL.

Moose Factory.....	80 inches	85
Montreal.....	177 "	

SUMMITS.

Trans-Canada (Pine River Pass)	2,800 feet
" (Peace River Pass)	2,000 "
Canadian Pacific (Kicking Horse Pass).....	5,400 "

The soil, climate, minerals and other resources of the country between James Bay and the north end of Lake Winnipeg, and between the last named point and Port Simpson via the Peace River Valley, are fairly well known from the reports of the Geological Survey Department at Ottawa. As these reports do not give such ample information as to the country between Lake St. John and James Bay, reports are annexed from missionaries who have lived in the country, from Professor Bell of the Geological Survey, and from Mr. Henry O'Sullivan, C.E., director of surveys of the Province of Quebec.

Quebec, January, 1902.

* Form returns kindly furnished by Mr. R. F. Stupart, Director of Meteorological Service at Toronto.

The Trans-Canada Railway.

QUEBEC, 16th February, 1901.

The Right Hon. SIR WILFRID LAURIER, G.C.M.G.

PREMIER,

OTTAWA.

SIR,

The Quebec Board of Trade and the promoters of the Trans-Canada Railway Company, represented by the delegates now present at this interview, beg respectfully to submit to the Government a very important project, probably the most important which has been brought before the Government of Canada since the inception of the Canadian Pacific Railway.

By an act of the Dominion Parliament passed in 1895 and amended in 1897, a charter was granted for a railway from the City of Quebec, passing north of Lake Winnipeg, to Port Simpson on the Pacific coast, with a branch to Montreal, and this charter is now being amended to provide for branches to Winnipeg and Toronto, and to give the Company the option to start from Lake St. John instead of Quebec.

The annexed map shows the proposed line from Quebec and from the head of navigation of the River Saguenay to James Bay, and thence touching the north end of Lake Winnipeg, passing through the Peace River district and the Peace or Pine River pass, to Port Simpson on the Pacific coast, with branches to Toronto and Winnipeg.

The advantages of such a line would be, briefly, these:—

1. **DISTANCE**—The distance from Quebec to Port Simpson would be 250 miles shorter than that from Quebec to Vancouver by the C. P. R., and from Chicoutimi to Port Simpson 370 miles shorter. The distance from Chicoutimi to Winnipeg would be 280 miles shorter than from Quebec (C. P. R.) to Winnipeg. The distance from Chicoutimi to Yokohama would be 720 miles shorter than from Quebec to Yokohama by C. P. R.

2. **GRADIENTS**—The summit of this line, in the Pine or Peace River pass, would be about 2,000 or 2,800 feet above tide—The C. P. R. summit, further south, is 5,400, and one of the American Pacific roads reaches an elevation of 11,000 feet. The summit between the St. Lawrence and James Bay is less than 1,200 feet, and the approaches to both summits are so gradual that there should be no difficulty in obtaining a maximum gradient of one per cent., from ocean to ocean, and possibly the maximum of 6-10ths of 1%, which is now so eagerly sought for by American Trunk lines.

3. **SEAPORTS**.—The harbor of Port Simpson is said to be the finest on the Pacific coast north of San Francisco. Nottaway is the only deep water harbor on James Bay, and with some dredging can be entered by vessels drawing thirty feet. The coast line of James and Hudson Bays, tributary to this railway, will be about 4,000 miles. Chicoutimi (six miles below the town) can be reached by vessels of any draught, and Quebec has magnificent docks, which have cost the Government \$3,000,000, with deep-water berths and elevator facilities for steamships drawing (should such draught be necessary hereafter) forty feet of water. It

is firmly believed that Quebec can be made a winter port for ocean vessels of suitable construction. The Baltic until a few years ago was closed, like the St. Lawrence, all winter. Now, it is regularly and safely navigated all winter by many steamers carrying from 5,000 to 8,000 tons of freight, and with no difficulty as to insurance. In any case, there can be no difficulty in making a winter port at Chicoutimi. The ice in the Saguenay is mostly salt-water ice, easily broken, the Saguenay offers perfect safety for ships, being all deep-water and protected from snow-storms by wall-like banks; and the St. Lawrence from the Saguenay to the sea has none of the shoals and other obstacles which exist to some extent between Tadousac and Quebec. Should these ports be temporarily inaccessible at any time in winter, the bridge now being built at Quebec will give this railway short and easy access to the winter ports of Halifax and St. John.

4. **CLIMATE.**—The worst climate to be met with on the proposed line will be that of the country between Lake St. John and James Bay. Recent information goes to show that this has been entirely misrepresented. Observations taken at Moose Factory, on James Bay, prove that the average summer temperature during five years was somewhat warmer than Chicoutimi, and three degrees warmer than Rimouski, and that the average snow-fall was half that of Montreal. So that from a climatic point of view, anything which can be grown at Rimouski, Chicoutimi or Winnipeg, can be grown in the James Bay territory.

5. **SOIL.**—Recent explorations prove that the soil in the James Bay territory is equal to that of the St. Lawrence valley. That of the immense Peace River valley is well known for its fertility, and present information goes to show that the country between James Bay and Lake Winnipeg, and between Lake Winnipeg and Peace River, is also excellent. So that it may be said that the whole country from the Saguenay to the Rockies is fit for settlement and for the raising of cereals, and could support a population of many millions, sufficient in fact, if the zone between this line and the C.P.R. were settled, to raise breadstuffs for the British Isles, and make them independent of all foreign countries.

6. **MINERALS AND TIMBER.**—The reports of the Geological Department indicate that this country is rich in minerals. The best of iron is found in the James Bay country, together with lignite coal and copper. The district north of Peace River abounds in petroleum, and the country between the Rockies and the Pacific coast in bituminous and anthracite coal, gold and copper, and a branch from this line would offer the shortest route on Canadian soil to the Yukon gold fields should a railway ever be needed to that country. The James Bay district and the country east and west of Lake Winnipeg are timbered with the best of spruce, and the rivers abound in water-powers to convert this timber into pulp and paper.

7. **MILITARY AND NAVAL.**—In the event of hostilities with our neighbors, which it is sincerely to be hoped may never occur, the present C.P.R. line could be broken in twenty places in a week, and communication would never be restored. The proposed line being from 300 to 600 miles from the frontier, protected by fleets at Quebec, Saguenay, Nottaway and Port Simpson, would be impregnable, and for this reason should receive the support of the British Government. This support need not be costly, as the price of a battleship per annum would pay the interest on the cost of the whole undertaking.

8. **MANITOBA.**—The branch to Winnipeg would give the Province of Manitoba its shortest and cheapest outlet to the seaboard. The saving in distance, the level character of the road and the consequent easy gradients, would, it is estimated, make it profitable to haul wheat to the seaboard at seven cents per bushel less than it now costs the farmer of Manitoba. This saving, even on the present crop, would nearly pay the interest on the cost of the road. Should the navigation of Hudson Straits ever prove practicable, the distance from Winnipeg to the Straits via Nottaway would be no greater than via Churchill, and through a much better country.

For all these reasons we think that the line indicated on the enclosed map would be the best that could be built, from an Imperial as well as Canadian point of view, and it should not be forgotten that for its entire length it will pass through a country between latitudes 47 and 54, or in the same geographical position as Paris, Berlin and Warsaw in Europe.

The great financial success achieved by the Canadian Pacific has rendered it much easier to secure capital for such an undertaking as this than it was twenty years ago, and the project should not have the antagonism of the capital interested in the Canadian Pacific, as it must be beneficial to that road by putting population into the zone of country between the two lines.

The Trans-Canada might readily be amalgamated with Messrs. McKenzie & Mann's Canadian Northern, as its location from the Saskatchewan to Port Simpson, and from Manitoba to Quebec, would be the best that could be selected for outlets to both oceans for that road.

We have reason to expect that the Province of Quebec will grant a subsidy of land, probably 20,000 acres per mile, for the first section of this railway from Lake St. John to James Bay, about 380 miles, and it is hoped that the Province of Ontario may grant a similar subsidy from James Bay to the western boundary of the Province near Lake Winnipeg.

If the Dominion Government would grant the usual double subsidy of \$6,400 per mile, it is believed that a financial basis would be established which would secure the necessary capital to carry out this most important undertaking which will make Canada a solid country with breadth and great agricultural resources, instead of a fringe of settlement subject, as it now is, to the good will - from day to day - of our powerful neighbors to the South.

Where the line passes through Dominion lands it would of course be expected that the Dominion will grant the same land subsidy as the Provincial Governments.

On this financial basis the promoters of this enterprise would be prepared to suggest the following advantages to Canada, advantages which have never yet been offered to the country by any other railway corporation:—

1.—To construct the entire road with steel rails and steel bridges of Canadian manufacture, thus offering to the new steel and iron works at Sydney, Midland, Sault Ste. Marie and Hamilton an immediate market for an immense quantity of steel.

2.—To give free transportation from Quebec to any point on its line for all immigrants and *bona fide* new settlers and their effects.

3.—To carry wheat from all points on its line in the Province of Manitoba to the ocean steamer at Chicoutimi or Quebec for nine cents per bushel, thus saving the farmer of Manitoba about seven cents per bushel on present freight rates to the seaboard.

We have the honor to be,

Sir,

Your obedient servants,

(Sig.) J. G. SCOTT,

(Sig.) GEO. TANGUAY,

Acting Secretary

President

Trans-Canada Railway.

Quebec Board of Trade.

Translation of a letter from the Rev. Father Nedelec, late Missionary at James Bay.

Mattawa, 15th November, 1887.

J. G. SCOTT, Esq.,
Quebec.

DEAR SIR,—

I beg to acknowledge receipt of your letter of the 8th inst., in which you ask me for information about the vast Hudson's Bay territory :—the Siberia of Canada. In order to answer your questions satisfactorily one would have to be an explorer, a geologist, a mineralogist and even a farmer, in a word an expert in every branch of knowledge. I confess that I am only a missionary to the Indians and the shanty men of the Ottawa. Nevertheless, I shall always esteem it a pleasure and a duty to oblige you to the utmost of my capacity, to the depth of my knowledge and extent of my observations. Beyond this, I can but refer you to good authorities on each subject. But to answer your questions :—

- 1st.—The country is generally habitable, excepting a few places, chiefly along the coast. Along the East coast the fishing is good.
- 2nd.—All kinds of grain, except wheat and buckwheat, also fruit and vegetables, are, as a rule, grown with success, except in a few scattered places on the coast.
- 3rd.—I find it difficult to say what population might be supported in this territory. There is room for millions, with improved agriculture and the development of industries.
- 4th.—The extreme heat is 100 ° and extreme cold on the coast—55 °. Average in January 30 °.
- 5th.—In some places the climate is better than that of the north of Germany, Poland, Norway, north of Scotland, Lake St. John, Newfoundland. In some parts the natural resources are magnificent, in others not so good. As a general rule it resembles Quebec and the district of Lake St. John. All that I can say is that the country is larger and more habitable than can be imagined.
- 6th.—The soil is in general of clayey nature. See "Les Relations des Jésuites;" Journey from Lake St. John to Hudson's Bay—Proulx. See also reports of Bowen, Stipendiary Magistrate, of Manitoulin Islands, Ontario—favorable.
- 7th.—Between Lake Temiscamingue and height of land, white and red pine, spruce and soft birch abound; on the other side of the height of land, spruce, soft birch and cedar.
- 8th.—See the report of Dr. Bell, geologist, as to minerals.
- 9th.—Any amount of fur, birds and fish; whales also abound. See the report of Captain Gordon, 1885, 1886-7.
- 10th.—The snow-fall is not excessive.

SUCH IS HUDSON'S BAY.

What was Canada 200 years ago? What were the United States? In my opinion it would be a good thing for the Province of Quebec to take possession of that part of Hudson's Bay that belongs to it. Your Company ought to establish Acadian settlements in the Bay. They are the very people for the country, and when the resources of the country are developed and wealth amassed, a steamboat should be sent from Quebec to further develop and explore the country, while waiting for the railway through the valley of St. Maurice.

Yours truly,

(Signed,)

J. M. NEDELEC, O. M. I.,
Indian Missionary.

EXTRACTS FROM A LETTER FROM REV. FATHER PARADIS, FORMERLY MISSIONARY
AT MOOSE FACTORY.

" This territory is very suitable for settlement and the land is first-class. From Lake Temiscamingue, which is 650 feet above the sea, to Moose Factory, a distance of 300 miles is one black clay plain, very suitable for grain, and well wooded with maple and other hardwoods. At the height of land, 920 feet above the sea, pine is found in abundance, also some very large poplar. From Lake Abittibi to James Bay the finest spruce in America is to be found, and on the south side of the mountains some red pine.

TEMPERATURE :—The thermometer has been as low as 50 below zero at Moose Factory—in summer as high as 100 above : at the height of land the summers are colder ; average snow-fall three feet, which is much less than at Quebec.

PRODUCTS :—The best possible potatoes and all root crops, are grown here. Grain has not been tested to any great extent. I think wheat would succeed as well as in Manitoba. Oats, hay and barley would certainly succeed. Natural hay, excellent for cattle-raising, is very plentiful. Excellent beef is raised here.

GAME :—Wild geese and duck are abundant at Fort Albany, north of Moose Factory ; 36,000 geese are killed there annually for provisions for the Hudson's Bay Company by the Indians, that being the number they are expected to furnish.

MINERALS :—See Dr. Bell's report. I find him very conscientious in his reports. Gypsum abounds at the mouth of the Abittibi River. I think there is coal and petroleum on the river. Iron is plentiful. Mineral springs abound.

Sturgeon abound in the rivers ; and on the east coast, 30 miles from shore, porpoises and all fish found in the Gulf of St. Lawrence, are found in great abundance.

I have no hesitation in recommending the construction of a railway from Quebec to James Bay. Indians say that the land towards Lake Mistassini is also very level with a clay soil. Towards the height of land it is sandy and rocky. Some prairies, 4 to 6 miles wide, without trees, extend to the west of James Bay, according to the Indians some 1200 miles.

I think this country might be compared to Germany in Europe, and the Fort Albany district with Russia.

The climate resembles that of Kamouraska, with the same flowers, wild fruits, such as gooseberries, strawberries, juniper berries and cranberries.

At Moose Factory there are some splendid gardens, containing currants, gooseberries and all kinds of vegetables. In one of them there is an ash tree, planted ten years ago, that now measures 13 inches diameter.

Ice leaves the rivers about end of April, and the Bay is navigable from 5th to 13th May. Closes from 1st to 20th November. The highest tide is 10 feet."

(COPY).

GEOLOGICAL SURVEY,

Ottawa, 7th March, 1887.

J. G. SCOTT, Esq.,

Quebec.

DEAR SIR,—

Your favor of the 4th reached me this morning, and I beg to answer your questions *seriatim* as follows:—

1.—A considerable proportion of the territory southward of James Bay is fit for settlement.

2.—My own explorations have not extended eastward of the Basin of Moose River. In that Basin a great deal of good land is found between the water shed of the great lakes and the commencement of the low level country to the south westward of James Bay. This would comprise about one-third of the region between Lake Superior and James Bay. The soil is mostly brownish gravelly loam and light colored clay, with sand in some parts. In the coniferous forests, when the ground is level, the surface is apt to be covered with deep moss, but when this timber has been burnt off and replaced by deciduous trees, the ground is dry.

3.—The summer and winter temperatures resemble those of the County of Rimouski. The summers not so hot, nor the winters so cold as at Winnipeg.

4.—The average snow-fall is about three feet, or a little more, still not quite so great as about the City of Quebec.

5.—Potatoes and all other kinds of root crops have been found to do remarkably well. Hay also grows luxuriantly. Barley would, I think, be a sure crop every year, and rye could also be grown with advantage. Barley is sown every year at Moose Factory and Rupert's House, and it has ripened well every year that I have visited these parts. Still it is said to fail some years. However, these places are much further north than the region I have indicated, and what is worse for them, they are near the sea, which is said to have an unfavorable influence in the autumn. Mr. John McIntyre (now of Fort William) says he has ripened wheat at Missinibi and New Brunswick House, within the above area. I have had experiments made at New Brunswick House and at Norfolk, on the Abittibi River, with a great variety of field and garden seeds, and the results proved that this region is capable of growing anything which can be raised, say in the County of Rimouski. I regard the region as well suited for stock raising and dairy farming, and it is not unlikely to prove fit for grain also.

The soil at Moose Factory is heavy and cold, still vegetables, &c., grow successfully here. Among the kinds may be mentioned potatoes, beans, peas, turnips, beets, carrots, cabbages, onions, &c., &c. As showing the absence of summer frost at Moose Factory in 1877, I mention at page 27 c of my report for that year, that, on our return to Moose Factory (from the North), in the end of September, we found that there had been no frost there all summer, and the most tender plants, such as melons and cucumbers, beans, balsams, tobacco, the castor oil bean, &c., growing in the open air, were still quite green and flourishing. That summer was, however, probably a finer one than usual.

It has been objected to this statement by some Hudson Bay Co.'s men, that I should have mentioned that some of the above plants had been started in the house. But all I wanted to show, was the absence of summer frosts that year. These plants are generally started under glass in other parts of Canada as well.

6.—White and red pine grow in the southern part of the basin of Moose River, but the timber most abundant throughout the whole country, consists of white and black spruce, tamarac, white cedar (as far north as Moose Factory), white birch, aspin, rough-barked poplar, "Jack" pine and bouleau. There is a little elm, and black ash, in the southern part, but it is not worth counting commercially. Some of the above woods are worth exporting.

7.—Minerals are to be found in this region; nearly all the metals are to be looked for in the Huronian formation, a belt of which is believed to run all the way from near Lake Abittibi, to the south of Lake Mistassini, and this would be crossed by any railway from Quebec to James Bay. Iron and gypsum are abundant to the north-west of Moose Factory.

The shores of Hudson's Bay, that would be tributary to the projected railway, afford a variety of useful minerals in paying quantities.

8.—Coal cannot be said to have been found in the region under consideration. I found lignite in various places on the Missinabi and Moose Rivers; also indications of it on the Mattagami and Albany Rivers, but the quality was mostly inferior, and in a well wooded country like this, would not be in demand for fuel. I also found anthracite on a long island on the east coast of Hudson's Bay, but I do not think the quantity likely to prove great, although the quality was first-class. As far as we are yet aware, there is a chance, geologically speaking, of finding coal in the islands on James Bay, but we have no evidence, as yet, of its actual existence there.

9.—Among the fish found in James Bay and Hudson's Bay, may be mentioned a fine white fish, lake trout of Lake Superior, and some smaller species, sea trout, salmon, rock cod, capling, &c., besides strictly fresh water fishes in the rivers and lakes, such as speckled trout, Backs' grayling and pickerel, pike, &c. The fisheries of the bay will probably be found to be valuable. The oil producing animals, such as seals and porpoises, may be included under "*the fisheries*."

10.—I have not considered the subject sufficiently, as yet, to say whether I would recommend the construction of a railway from Quebec to James Bay, or not; but if it should be decided to go on with such a line, the objective point might be the mouth of the Rupert River, the southern extremity of Rupert Bay, or Hannah Bay. Deep enough water can, I think, be found at these points and leading out from them, although the south end of James Bay is shallow. If a railway were built to the south end of James Bay, steamers might run up the East main coast, which I believe (from experience) will prove attractive as a summer resort for the people of the United States and Canada.

For further information, I would refer you to some of my reports under page 27 c, with general survey reports for 1879-80, and page 7 c, on ditto for 1877-78.

I am, Dear Sir,

Yours truly,

(Signed,) ROBERT BELL, C.E., M.D.

LORETTE, 29th DECEMBER, 1901.

J. G. SCOTT, Esq.,
 General Manager,
 Trans-Canada Railway Co.,
 Quebec.

DEAR SIR :

Your letter of the 26th inst., asking for information regarding the northern portion of our province between the height of land and James Bay recently acquired from the Dominion Government, duly received, and in response I will endeavor to answer your questions in the order given :—

1st.—“What proportion, approximately, of the territory in question, south of East Main River and west of Lake Mistassini, would you consider to be fit for settlement?”

Ans.—From what can be seen by following the principal water-courses and occasional runs inland I may say that over two-thirds of the land area should be fit for cultivation, for there are no mountains of any great extent, and the land generally rises in easy swells from the lower levels of the river beds, and unless that extensive swamps may exist in the level plains between the main water-ways, there is no reason why the greater part of the country would not be fit for settlement should climatic conditions prove favorable.

2nd.—“What is the nature of the soil?”

Ans.—The soil is chiefly clay or clayey or sandy loam, with here and there knolls of pure sand thickly covered with jack pine wherever the country has been burnt.

There are also some patches paved with boulders, generally in the neighborhood of chutes and rapids, but the proportion of rocky land is far less to the north of the St. Lawrence watershed than to the south. I can speak of this from my own personal knowledge of the country, for I have ascended all the rivers that drain the St. Lawrence slope to the height of land from the meridian of Lake Mistassini westward to the Ontario boundary, and I can safely say that, as regards the nature of the soil, the northern slope is far superior to the southern.

3rd.—“What is the nature of this climate? and what about the snowfall?”

Ans.—My explorations in that region were chiefly made during the summer months, from June until October inclusive, and I did not experience any marked difference between the climate there and on the St. Lawrence slope in equal altitudes. The rainfall in my opinion is greater; but my assistants, who wintered in the neighborhood of Rupert House in 1897-8 and traversed the country from there to Lake Abittibi in March and April, report that the snowfall is less than in the regions bordering the River St. Lawrence.

Taking a mean of the observations of my party, and from what I could learn from the natives and the Hudson Bay Company's men, I should say that the average depth of snow in mid-winter would be between 8 and 4 feet.

As you will see by the tables in my last report of progress kindly furnished me by Mr. Stupart, director of the Meteorological Bureau, Toronto, taking the mean of the six months of summer, May to October inclusive, for three years, gives the climate of Moose Factory several degrees warmer than that of Rimouski.

I enclose you under another cover a copy of said report of progress with accompanying plans and profiles.

4th.—What description of grain and root crops do you consider could be profitably raised if there were railway communication through the center of this territory? and is the country suitable for raising live stock?

Ans.—Oats, barley, peas and buckwheat. Wheat has been raised at Waswanipy, about the center of the region in question, and the grain grown from seed raised there succeeded as well as from the seed sent there by Dr. R. Bell, Director of the Geological Survey, from the experimental farms.—See Dr. Bell's reports 1895-6. Potatoes, cabbage, turnips and nearly all kinds of vegetables grown in Canada, are successfully raised at Waswanipy, Rupert House and Moose Factory, and even as far north as East Main Fort.

It appears that sheep are more successfully raised at the latter post than at Rupert House.

Splendid horned cattle are raised at all these posts: the only drawback to stock raising there may be in the length of the winters.

5th.—"Is the country well timbered. and with what kinds of timber?"

Ans.—The country is in general well covered with spruce, the chief marketable timber; poplar and bouleau (white birch) are also found in abundance, wherever forest fires have made their mark. Banksian or jack pine is seen in the poorer districts, but there is no white or yellow pine beyond the height of land, with the exception of a few straggling groves in the neighborhood of Lake Abittibi.

A species of large poplar called *Liard* or balm of Gilead, grows very extensively in the Mekiscan Valley, some large enough to give four or five saw-logs of from one to 2½ feet diameter without limb or knot.

This kind of timber is said to be earnestly sought for by cabinet-makers. Tamarac for railway construction is found throughout the entire region, but a goodly portion of it has been recently killed by the saw fly.

6th.—"What minerals are likely to be found?"

Ans.—Iron in abundance, copper, gold; in fact all the minerals may be looked for in the Huronian belt that traverses this region from Lake Mistassini westward. See Geological Reports.

7th.—"What are the fisheries, and are they likely to prove valuable?"

Ans.—The whitefish, trout, sturgeon, pike and doré of the interior lakes and rivers of the Nottaway basin will certainly become valuable if railway communication is had there.

There are no sturgeon in the Rupert waters, but all the other kinds of fish mentioned above are taken there in abundance.

I am not sufficiently informed to say what the fisheries of James and Hudson Bay may be; all I can say is that while surveying the coast in the neighborhood of the mouth of the East Main River, I saw several porpoises playing around, and I have seen an abundance of trout and whitefish taken by the Indians between there and Rupert House.

8th.—"Can a good seaport be obtained on James Bay, and with what depth of water?"

Ans.—James Bay is in general very shallow. The H. B. Co. ships cannot go within seven miles of Moose Factory.

At the mouths of the Rupert and Little Nottaway Rivers, safe harbors may be had for vessels of from ten to fourteen feet draught, but they can only enter at high tide.

At the mouth of the Great Nottaway sufficient water is found for the largest vessels afloat, but a considerable amount of dredging would have to be done before they can enter there.

Q/A.—“ Are there any good water-powers, and what are the largest ? ”

Ans.—An abundance of water-power is found at convenient intervals all over the country.

I measured one on the Great Nottaway,—a river as large as the Ottawa and in places a mile in width,—that gave about 400,000 horse-power, and three on the Rupert,—another immense River,—that gave over 800,000 each ; one of them gave 850,000 horse-power.

My information as to this country is derived from three different explorations made by me for the Provincial Government in 1894, 1897 and 1899, one from Temiscamingue and Lake Victoria, one from the headwaters of the St. Maurice, and one from Lake St. John, returning in 1897 by the Moose River and Lake Superior. I have followed the Nottaway and its three branches from their source to the mouth of that immense river at James Bay.

A large portion of this country forms a great clay plain which may be compared as to soil with the valley of the St. Lawrence between Montreal and Quebec.

Sincerely yours,

HENRY O'SULLIVAN,

D. L. S. & C. E.,

Mem. Can. Soc. C. E.

COMPARISONS of the Temp^r (July to September, inclusive)
at MOOSE FACTORY. Observations are from the year 1885,
exclusively from observations

FALL.							
	Moose Factory	Rainy Lake	Winnipeg	Port Arthur	Ottawa	Montreal	Quebec
	°	°	n.	In.	In.	In.	In.
JANUARY.....	-3.4	9.7	2.3	2.3	7.8	21.5	28.6
FEBRUARY....	1.8	14.9	4.2	5.4	23.8	48.5	38.0
MARCH.....	11.9	22.6	11.2	11.2	20.9	29.1	37.5
APRIL.....	25.2	32.7	8	6.6	46.5	29.8	21.0
MAY.....	43.9	43.5	2.4	...	S	...	...
JUNE.....	52.4	58.1	...	...	...	...	...
JULY.....	62.5	57.4	..	...	...	...	...
AUGUST.....	59.2	56.0	...	...	...	...	...
SEPTEMBER...	51.0	51.0	...	...	...	...	...
OCTOBER.....	39.1	41.0	2.6	0.6	0.8	2.8	1.8
NOVEMBER...	21.3	29.1	7.3	8.8	11.4	14.4	19.0
DECEMBER....	9.9	17.0	12.2	4.2	28.0	36.5	29.0
YEAR.....	31.2	35.7	12.2	39.1	138.2	177.6	164.8
WINTER.....	3.4	15.7	7.7	18.9	51.5	94.1	94.0
SUMMER.....	57.6	54.8					

COMPARISONS of the Temperature, Rain and Snowfall for each month, the year, &c. Winter qu
at MOOSE FACTORY, JAMES BAY, with Stations in other parts of Canada. MOOSE FACTO
exclusively from observations noted in the reports of the Government Meteorological Bureau

	TEMPERATURE.									RAINF.				
	Moose Factory	Rimouski.	Dalhousie.	Chicoutimi.	Winnipeg.	Fort Arbut.	Ottawa.	Montreal.	Quebec.	Moose Factory	Rimouski.	Dalhousie.	Chicoutimi.	Winnipeg.
JANUARY.....	-8.4	9.7	8.7	-1.7	-18.2	-3.7	12.0	12.1	7.8	In.	In.	In.	In.	In.
FEBRUARY....	1.8	14.9	15.0	2.2	6.1	0.9	4.4	5.9	6.6	0.09	0.13	...	0.00	0.0
MARCH.....	11.9	32.6	32.0	8.6	8.8	8.0	12.8	18.2	11.8	0.08	0.1	0.06	0.00	0.0
APRIL.....	25.2	32.7	38.1	31.7	35.6	32.5	36.2	37.7	35.9	0.19	0.75	1.25	0.00	0.0
MAY.....	43.9	48.5	45.0	48.3	50.6	44.8	55.8	55.4	51.9	0.36	1.37	1.89	0.50	1.8
JUNE.....	52.4	53.1	55.9	53.8	60.5	54.4	63.1	62.1	59.8	1.01	2.59	3.67	0.75	1.7
JULY.....	62.5	57.4	62.8	66.0	64.9	61.2	69.1	69.5	63.5	3.13	2.95	3.54	9.10	3.0
AUGUST.....	59.2	56.0	59.8	56.9	58.8	56.1	62.4	63.0	61.6	3.22	3.49	3.86	4.22	2.6
SEPTEMBER...	51.0	51.0	54.4	48.3	52.8	50.6	54.9	55.4	52.9	3.84	3.34	4.63	3.22	1.9
OCTOBER.....	39.1	41.0	42.0	39.0	37.5	37.3	43.9	44.1	42.3	4.37	2.84	3.79	3.82	0.7
NOVEMBER...	21.3	29.1	27.5	25.2	26.2	28.9	32.8	32.8	31.0	1.79	3.07	3.34	3.08	0.3
DECEMBER....	9.9	17.0	15.6	8.1	8.6	10.2	17.5	19.4	16.2	0.52	1.18	2.16	0.98	0.0
										0.16	0.78	1.18	0.15	R
YEAR.....	31.2	35.7	36.8	31.8	32.1	32.2	38.7	39.2	37.0	19.44	22.55	29.04	25.27	11.2
WINTER.....	3.4	15.7	15.2	1.4	3.5	1.7	9.6	10.4	8.7	0.34	0.99	1.81	0.00	0.0
SUMMER.....	57.6	54.8	59.0	57.1	58.8	56.0	62.2	62.5	60.3	11.33	9.67	12.01	10.76	5.1

[illegible]

TRANS-CANADA RAILWAY COMPANY

Names of Promoters and Shareholders.

Col George Earl Church.....	London, England.
Richard Liddulph Martin.....	do
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George Tanguay, M.P.P.....	Quebec
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Gaspard Le Moine.....	do
Victor Chateauvert.....	do
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Lorenzo Evans.....	do
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N. Flood.....	do
Frank W. Ross.....	do
Jas. MacNider.....	do
A. E. Vallerand.....	do
G. G. Stuart.....	do
W. M. Macpherson.....	do
Henry O'Sullivan.....	do
J. D. Guay.....	Chicoutimi.
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O. Côté.....	St. Alphonse, Chicoutimi.
Lt-Col B. A. Scott.....	Roberval.
Jos Girard, M.P.....	St. Gédéon.
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TRANS-C

